

# Epistemic Modal Eavesdropping: a straight solution to a relativist challenge

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May 27, 2013

## Abstract

A primary challenge from the relativist to the contextualist about epistemic modals is to explain eavesdropping data—i.e., why the eavesdropper is inclined to judge the speaker as having uttered an epistemic modal falsehood (when she is so inclined), even though the speaker’s utterance is true according to reasonable contextualist truth conditions. The issue turns in large part on the strength and shape of the data, both of which are in dispute. One complaint is that an eavesdropper’s truth value judgments fluctuate with variations of non-epistemic fact (even after the relevant epistemic/information states are determined). The project here is to strengthen and reframe this complaint in a debate-neutral way, and to show how a sober contextualism can uniformly accommodate it and the standard eavesdropping data. Along the way we reject John Hawthorne’s danger-theoretic explanation of these subtleties.

The contextualist and relativist agree that the truth value of an epistemic possibility claim

“It might be that  $\phi$ ”

is sensitive to the epistemic states of members of the relevant group. For the contextualist the relevant group is a function of the speaker’s context of utterance, and for the relativist it is a function of the assessor’s point of evaluation of the speaker’s utterance. The following are familiar tokens of the contrary frameworks:

(*Contextualism*)

“It might/may/can be the case that  $\phi$ ”, uttered by  $x$  in the epistemic sense, is true at the relevant point of assessment iff  $\phi$  is compatible with the set of propositions known by  $x$  (and her conversational partners) at the world and time of utterance. We’ll sometimes say, ... just in case there is a  $\phi$ -world that is epistemically accessible to  $x$  (and her conversational group).

(*Relativism*)

“It might/may/can be the case that  $\phi$ ”, uttered by  $x$  in the epistemic sense and assessed by  $y$ , is true at the relevant point of assessment iff  $\phi$  is compatible with the set of propositions known by  $y$  at the world and time of  $y$ ’s assessment of  $x$ ’s utterance. Alternatively, ... just in case a  $\phi$ -world is epistemically accessible to  $y$ .

The contextualist framework (not necessarily the above instance) is the dialectical default, since it invokes machinery similar to that already at work in the semantics of other context sensitive expressions (e.g., indexicals, and demonstratives). Movement from the default to the more exotic relativist framework then requires strong motivation. In that spirit the relativist emphasizes empirical data that allegedly only she can accommodate. The most forceful is the so called *eavesdropping data*. For instance, Jane is at the bus stop wondering where her bus is, and says to her friend, “We may have missed the bus.” George is eavesdropping nearby and mumbles, “She’s wrong. They can’t have missed the bus. I’ve been here for an hour and know it has not come.” A natural reading is that our eavesdropper, George, is denying Jane’s epistemic modal claim.

At bottom the eavesdropping data has the following structure:

*(Standard Eavesdropping Data)*

- Speaker  $x$  utters the modal claim, “It might/may be that  $\phi$ ”.
- $\phi$  is compatible with the set of propositions known by  $x$  and her conversational partners.
- The eavesdropper  $y$  knows that  $\neg\phi$  (and has no dispute with the above compatibility claim).<sup>1</sup> Yet,
- $y$  is inclined to judge  $x$ ’s utterance as false.

The familiar line, in Andy Egan, et.al. (2005) and John MacFarlane (2011), is that the relativist, but not the contextualist, can straightforwardly

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<sup>1</sup>Suppose this about our eavesdropper throughout.

explain the eavesdropper’s judgment. After all,  $\phi$  is compatible with the set of propositions known by the speaker and her group, and the eavesdropper does not dispute this. By contrast,  $\phi$  is not compatible with what the assessor knows, when the assessor is the eavesdropper. The relativist concludes that her own framework, even if exotic, is superior to the dialectical default at explaining such basic epistemic modal talk.

John Hawthorne (2007) is motivated by the concern that exotic approaches advocated by relativists, including earlier incarnations of himself, paid “insufficient attention to the shape of the data” and are “insufficiently imaginative and patient about trying to explain the data within a more sober framework”. The shape, over and above what has already been described, involves two subtleties about which the basic relativist framework says nothing. The first, repeating von Fintel and Gillies (2008: 82), is that not everyone agrees that the eavesdropper is inclined to judge  $x$ ’s modal claim as false. Some competent eavesdroppers fluctuate in their judgment about  $x$ ’s utterance. The second is that the inclination to judge  $x$ ’s claim as false sometimes varies with objective (i.e., non-epistemic) considerations (even after any relevant knowledge-set is fixed). Hawthorne offers a *danger-theoretic* explanation of these subtleties and the standard eavesdropping data in his attempt to short-circuit the primary motivation for exotic machinery.

The spirit of the project is here embraced. However, Hawthorne’s defense of the subtleties is unsatisfactory. We strengthen that defense and redeliver the data more forcefully. Additionally, we argue that Hawthorne’s danger-theoretic approach is still not patient and imaginative enough. For

a semantic explanation of the data and its shape is available within a sober contextualist framework. On offer is a straight solution to the relativist's challenge to explain eavesdropping and related data.

### *Non-epistemic Considerations*

The centerpiece of Hawthorne's discussion is a pair of cases meant to show that objective considerations sometimes affect the eavesdropper's truth value judgments, even after the relevant knowledge-set is determined.<sup>2</sup>

Here is Hawthorne's (2007: 94) motivation of the idea:

Given that it is easy to get into the frame of mind where I offer 'I might be on the bus' as an acceptable explanation of why Susy is hiding, it is also easy to get into the frame of mind where I [qua eavesdropper] say that 'That's true' when Susy hides and says 'John might be on this bus'.

Hawthorne (2007: 95) considers another Susy case, but

...where I do not in fact ever travel on buses, even though Susy does not know this. ...in this case I'm far less inclined to offer 'I might be on the bus' ... and far less inclined to judge Susy's assertion as correct.

So we have the following pair of cases. In (Bus Case 1) Susy says, 'John might be on this bus' and the eavesdropper, John, is inclined to judge her

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<sup>2</sup>Hawthorne should be read this way, because both parties to the debate already agree that, *prior* to the determination of whose knowledge matters, some objective considerations (e.g., about who is speaking/assessing, and when, etc.) affect epistemic modal truth value judgements.

claim as true. In (Bus Case 2) Susy utters the same sentence, but John never rides buses and he is less inclined to judge her claim as true.

In both cases the assessor knows that he is not on the bus. So the relativist framework by itself is not equipped to explain the difference. If there is a socio-pragmatic explanation, and if it also informs the standard eavesdropping data, then we lose the most forceful motivation for relativism. Notice the above contextualist framework is just as impoverished, since the cases mark no difference in the epistemic states of Susy and her conversational partners.

Before we turn to Hawthorne's danger-theoretic explanation of the data, we should improve on his support for the idea that objective considerations affect the eavesdropper's judgments in a way that negatively affects relativism. The main worries arise from the fact that the bus cases involve action-explaining uses of the might-claim.

Action-explaining uses of might-claims arguably involve an elided attitude operator, as articulated in Hacquard (2006: 121).<sup>3</sup> When I say, "I might be on the bus" to explain why Susy is hiding, even though I know that I am not on the bus, I am saying that Susy *thinks* I might be on the bus. I am thereby suggesting that her thinking as much is an adequate explanation of her action. Analogously, when I offer "That's true" after Susy says, "John might be on this bus", in reply to (say) her interlocutor's question, "Why are you hiding in the bushes?", I am advocating that her *thinking* that I might be on the bus is an adequate explanation of the behavior. Incidentally, the approach naturally explains the difference we are highlighting.

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<sup>3</sup>The elided attitude approach is also adopted by MacFarlane (2010).

For Susy's thinking I might be on the bus is an adequate explanation of why she is hiding in the bushes, only if I ever ride on buses. The critical point is that Hawthorne's presentation of these interesting subtleties then misses the target in two respects. First, to the extent that the relativist already admits that assessor's knowledge is not activated with the action-explaining use of the modal, the bus scenarios and the subtleties that they introduce do not tell against the basic relativist framework. Second, and consequently, the lessons from the bus examples are not generalizable. In particular, they do not speak to the standard eavesdropping cases, since they definitively do not invoke action-explaining uses of the modal. The bus cases then simply do score a direct hit against the motivations for relativism. The next section aims to reframe the phenomenon to better serve that purpose.

### *Non-epistemic Considerations Revisited*

What is important to Hawthorne's pair of cases is not that the modal is being used to explain action, or even that eavesdropping is going on. What matters, and what would begin to undermine the motivation for relativism, is that objective factors generally affect the target judgements (even after the relevant information states have been determined). And if the target judgements, and by analogy the original eavesdropping data, can be explained in this way, without appealing to assessment sensitivity, we vitiate relativism.

The following minimal pair better demonstrates the sensitivity to objective factors:

(Sunglasses 1)

Speaker A: “My sunglasses have been missing for a week. They may be in the ocean.”

Speaker B: “Oh have you recently been to the beach?”

Speaker A: “Yeah, I was there last week. And I haven’t seen them since.”

A’s knowledge is compatible with his sunglasses being in the ocean, and A appears to utter an epistemic modal truth. Now the variation:

(Sunglasses 2)

Speaker A: “My sunglasses have been missing for a week. They may be in the ocean.”

Speaker B: “Oh have you recently been to the beach?”

Speaker A: “No. I haven’t.”

Again A’s knowledge is compatible with his sunglasses being in the ocean. But, we are less inclined to judge A’s modal claim as true. The position has empirical support. The narratives were presented in random order to subjects with native English. The speaker’s possibility-claim was highlighted, and the subjects were asked whether they agree or disagree that the claim is true. 96% of 149 subjects agreed that the modal claim is true in (Sunglasses 1), and among those only 22% agreed with the same modal claim in (Sunglasses 2).<sup>4</sup>

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<sup>4</sup>Slicing the data another way, by allowing only the subjects’ first question/answer to count so as not to influence the second question/answer, the study uncovered virtually



What triggers the difference is that the sunglasses-in-ocean possibility becomes “far-fetched”, or more remote. I do not mean “less probable”. Lowering the probability of  $x$  winning the lottery, for instance, will not generally reduce our tendency to judge as true the claim, “ $x$  may win the lottery”.

The above minimal pair improves on Hawthorne’s in a number of respects. First, it does not presuppose that a listener/eavesdropper, who knows not- $\phi$ , hears the speaker’s claim, “ $\text{Might}(\phi)$ ”, as true. For in these cases the listener is just as ignorant as the speaker about the truth value of  $\phi$ . As such the presentation begs no question against a relativist who wishes to hold firmly to the general principle that no third-person information-states are relevant for the proper evaluation of a bare (non-elliptical) epistemic modal claim. Second, the data here makes no use whatsoever of the special role that epistemic modals play to explain action. As such, (i) whether the data tells against relativism is independent of any particular account of action-explaining ‘mights’, and (ii) the prospects are better for such cases to shed light on more standard eavesdropping data.

Still neither contextualism nor relativism speaks to the difference between the cases. In both cases the ocean scenario is compatible with what everybody knows about the cases. Enter danger theory.

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identical results. 96% of subjects who received (Sunglasses 1) as their first narrative agreed with the modal claim. By contrast, only 23% of subjects who received (Sunglasses 2) as their first narrative agreed with the modal claim.

### *Danger Theory*

Hawthorne posits a danger-theoretic use of modals in addition to a purely epistemic use. On this use, “It might be that  $\phi$ ” (where  $\phi$  describes some bad consequence) expresses something true, roughly, just in case there are nearby worlds where  $\phi$  is true. However, bad consequences are not generally playing a role in standard eavesdropping cases. So drop that bit. The important aspect of the account is that it rightly highlights a counterfactual reading of the modal.

Hawthorne takes the ambiguity between the purely epistemic and counterfactual readings to explain why the eavesdropper is inclined to judge the speaker as having said something false (when she is so inclined). Knowing that the compliment is false in actual and nearby worlds, the eavesdropper denies the counterfactual claim that she attributes to the speaker. Hawthorne also emphasizes that we often waver in our assignment of truth values in many cases including familiar eavesdropping cases. This “slip-page”, as he calls it, is to be explained by our not knowing whether the epistemic or counterfactual use is in play. Moreover, the ambiguity is said to explain the revised bus cases, and for the same reason, should explain our sunglasses cases. When the subject has been to the beach (or John does ride on buses), the speaker’s claim is readily judged true because it is apparently true on either reading. But when our subject has not been to the beach (or John never rides on buses), then there are no nearby worlds where the sunglasses find their way to the ocean (or nearby worlds where John is on the bus). So, on the counterfactual reading, the claim is naturally

heard as false. By contrast, on the purely epistemic reading, the claim is naturally heard as true. Hence, not knowing which use is in play, we are less inclined to judge the modal claim as true. In a word, the ambiguity of ‘might’ (and the eavesdropper’s semantic confusion) is Hawthorne’s explanation of the data, including the standard data otherwise thought to bolster the relativists’ program.

A disappointment is that danger theory is unable to explain enough of the relativists’ core data. The relativist’s challenge in MacFarlane (2011) is not only to explain why the eavesdropper is inclined to judge the speaker in error (when she is so inclined), but also why in some of those same cases (1) we take the eavesdropper and speaker to be in a state of disagreement (i.e., to be in circumstances where they cannot both speak the truth), and (2) the speaker is inclined to retract her initial claim (later) upon learning of the eavesdropper’s perspective. Danger theory falls short here. If the danger-theoretic explanation is correct while the speaker is making an *epistemic* modal claim, then our judgmental eavesdropper is simply confused about which reading is in play. Hence, it remains unclear why the speaker would be inclined to retract after learning of the eavesdropper’s criticism. Moreover, both may speak the truth since the speaker is affirming the epistemic claim and the eavesdropper is denying the counterfactual claim. The very possibility of a genuine epistemic modal disagreement between them is unaccounted for by danger-theory. So, if the epistemic reading of the speaker’s claim is *salient* to us, as it is supposed to be in the relativists’ presentation of the data, then it remains unclear why we would ever judge the speaker and eavesdropper to be in a genuine state of disagreement.

Another problem for danger theory is that when the epistemic reading is salient, we still get slippage. Ply the narratives with epistemic cues: use ‘may’ instead of ‘might’ since it is harder to read counterfactually, and make explicit the speaker’s purely epistemic reasons for making the modal claim. Then notice that our pretheoretical intuitions (qua more informed eavesdropper) still waver. And our judgements about whether the speaker and an arbitrary eavesdropper are in a state of disagreement are no more decisive.

A further concern is that no explanation has been given as to why the eavesdropper would hear the false, rather than the true, reading of the speaker’s might-claim. Does not charity usually select the latter?<sup>5</sup> Perhaps. But sometimes the more natural reading is the false or more confusing reading. Consider a context where one utters the following apparent joke, “Two guys walked into a bar. The third guy ducked.” Listeners do not often understand this. The second sentence appears to be a non sequitur, because the hearer latches onto the more expected reading of the first sentence, in which ‘bar’ means ‘pub’. The less expected reading of ‘bar’ (as ‘a horizontal rod or pole’) is needed to facilitate our understanding of the second sentence. Perhaps analogously the counterfactual reading of the speaker’s might-claim is more expected than the purely epistemic reading. But if something like this is going on, then the details are owed by the danger theorist.

Finally, danger theory must deny that there are *any* cases where the eavesdropper correctly denies, genuinely disagrees with, or elicits an appropriate retraction on, the speaker’s *epistemic* modal claim. Otherwise, since

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<sup>5</sup>I thank \*\*\*\* for the additional objection.

danger theory says nothing about these interesting cases, relativism can declare exclusive jurisdiction over them, and the debate is right back where we started.

Next we consider a sober non-error-theoretic, simple contextualist framework that is in a position to accommodate our data—viz., that in some of the target cases (1) the speaker S is in a position to assert an epistemic modal claim, (2) the eavesdropper E correctly judges that S uttered an epistemic modal falsehood, (3) we correctly judge that S and E are in a state of genuine epistemic modal disagreement, and (4) S would be right to retract, upon later learning of E and her improved epistemic circumstances. Moreover, (4) our truth value judgments about a third-party’s epistemic possibility claim may waver (even after the relevant information-set is determined), and (5) sometimes this wavering is accompanied by shifts in remoteness of the target possibility.

### *Sober Contextualism*

Following Angelika Kratzer’s (1981) perfectly general modal semantics, the semantic value of a modal operator in context is associated with a quantificational force (e.g., existential or universal), a restricted base set of a worlds (e.g., epistemically or deontically accessible), *and* an ordering relation on that base (e.g., comparative similarity to the distinguished target world(s), which may or may not include the world of evaluation).<sup>6</sup> When the modal base is epistemic, Kratzer favors “stereotypical” target worlds, the source

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<sup>6</sup>MacFarlane (op.cit.: 145) acknowledges that for the contextualist the modal base will be ordered, but does not explore the consequences of that detail for his eavesdropping arguments. We do that here.

of which is “a suitable normalcy standard” at the world of evaluation. Her ordering relation for epistemic modals is comparative similarity to those “stereotypical” worlds. Accordingly, “It might be that  $\phi$ ” in the epistemic sense is true on this account just in case some of the epistemically accessible worlds that are most similar to the stereotypical target worlds are  $\phi$ -worlds.

Stereotypical target worlds incur too high a price on the logic. The world of evaluation,  $w$ , need not be most similar to the stereotypical world(s) by the normalcy standard at  $w$ . But then  $\phi$  may be true at  $w$ , even though  $\phi$  is false at all worlds most similar to the stereotypical worlds. Consequently, we lose the principle that all truths are epistemically possible. Things are even worse when, like Kratzer, we treat the indicative conditional as a special case of epistemic modality. For then the indicative will be true, roughly, just when all the epistemically accessible antecedent-worlds that are most similar to the stereotypical worlds are consequent-worlds. *Modus ponens* fails unacceptably, because the analysis allows for the consequent to be false at an actual antecedent-world that is *not* most similar to stereotypical worlds, even though the consequent is true at all epistemically accessible antecedent-worlds that are most similar to stereotypical worlds. To avoid these breakdowns in logic, it is better to treat the world of evaluation as the target world. For then the world of evaluation will always be at least as close to the target world(s) as any other world is. For that is the relation (known as *weak centering*) that is needed to preserve modus ponens.<sup>7</sup>

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<sup>7</sup>Incidentally, we favor a nearness relation that is constrained by the *limit assumption*, *strong connectedness* and *weak centering*, but not by *anti-symmetry* or *strong centering*. Those details do not directly concern the present discussion.

The truth condition favored here for epistemic possibility claims is this:

*(Sober Contextualism)*

“It might/may/can be the case that  $\phi$ ”, uttered in context  $c$ , is true at world  $w$  iff some closest-to- $w$  epistemically accessible world is a  $\phi$ -world, where epistemic accessibility is a function of  $c$ , and  $\phi$  is contingent and non-modal.

This allows objective circumstances to affect the truth values of our epistemic modal claims, even while holding fixed the epistemic base. After all, whether some world is comparatively closer than another to a world  $w$  depends on, among other things, the contingent (non-epistemic) facts at  $w$ . And the motivation for building this in is independent of present concerns. Epistemic modal claims are not solely a statement about consistency with the modal base. They typically express contingent, a posteriori, informative propositions.

The account treats the target data. Closeness considerations naturally explain the difference between the cases. Never riding on buses in (Bus 2) pushes the bus-riding-worlds much further away from the world of evaluation than they were in (Bus 1). Not having been to the beach in (Sunglasses 2) pushes the sunglasses-in-ocean-worlds much further away from the world of evaluation than they were in (Sunglasses 1). That explains the decreased inclination to judge the modal claims as true in the Case-2-examples. For on the above account, epistemic possibility implies nearness of possibility.

What about slippage and eavesdropping? Sober Contextualism predicts slippage, even if an epistemic reading is the only one available. To the extent

that the narrative is vague about the relative distance of the possibility under consideration, competent verdicts will waver about the truth of the epistemic modal claim. And this of course does not presuppose that we're confused about whether the use is epistemic. The vagueness of closeness can be in play even on a saliently epistemic reading. So the account explains the slippage data better than danger theory, which requires confusion (and sometimes error) about whether the speaker is expressing an epistemic claim.

Moreover, to the extent that an eavesdropper is more informed than the speaker about objective considerations that indicate the remoteness of the possibility under consideration, she can correctly judge the speaker to have uttered an epistemic modal falsehood (even when the compliment is compatible with the set of propositions known by the speaker and her conversation partners). Consequently, the eavesdropper's more informed perspective (with respect to these closeness-determining matters of fact) can explain her (and our own) inclination to judge the speaker as having said something false, and accordingly, the speaker's inclination to retract when (later) appraised of the eavesdropper's perspective. Additionally, a genuine epistemic modal disagreement is possible between the speaker and eavesdropper, on this view, because enough shared content is secured between them. The speaker affirms a proposition that is true just in case the compliment is true at a closest world compatible with, say, what the speaker knows; while the eavesdropper denies the proposition that is true under those circumstances. She can deny this, for instance, by simply saying, "No. What the speaker just said is false".

What about when the eavesdropper directly denies the modal claim?



Instead of merely denying that the speaker said something true, the eavesdropper may state, “No. It can’t be that  $\phi$ ” or “No. It’s false that it might be that  $\phi$ ”.<sup>8</sup> Is the eavesdropper disagreeing with the speaker? Not obviously. My own intuitions waver. But suppose there are some cases like this where we decisively attribute a genuine dispute. It might be objected that our framework cannot handle such cases on the grounds that the eavesdropper’s denial concerns only information possessed by her own conversational group. Accordingly, we mistakenly predict that our speaker and eavesdropper are talking past one another.

The sober contextualist has a number of good potential replies. She may claim that the eavesdropper is denying the *counterfactual* modal claim—a claim that is true just in case there are nearby  $\phi$ -worlds. And since denying that claim entails the denial of the epistemic modal claim, the speaker and eavesdropper genuinely disagree! Alternatively, she can explain how the eavesdropper, even with the new wording, is able to deny directly the very same epistemic claim that the speaker is affirming. For instance, one development of our position says that “epistemic accessibility” is determined by the function, “all and only those practical deliberators salient in the speaker’s conversational context”.<sup>9</sup> Then, so long as the original speaker S is the salient deliberator in the eavesdropper’s conversational context, the

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<sup>8</sup>Re-characterizing the narrative this way, MacFarlane (2010) aims to avoid the objection that the eavesdropper is targeting the prejacent—i.e., is merely denying  $\phi$ .

<sup>9</sup>Cases that support this account of *who* is relevant, and that support the occasional irrelevance of the speaker, include but are not limited to cases where epistemic modals are used to explain, guide, or evaluate third-party action. The position is defended at length in \*\*\*\*.

eavesdropper can use “It can’t be that  $\phi$ ” to deny the very same epistemic modal claim that S has affirmed. Either of these options would provide us with a straightforward semantic explanation of this variation of the disagreement data.

Where does Sober Contextualism stand on issues of epistemic “faultlessness”—i.e., on the intuition that both parties are well-positioned to make the claims that they are making (even if they genuinely disagree)? This phenomenon is not special to epistemic modal discourse. I can have good reason to think that  $\phi$ , even if  $\phi$  is false and somebody else has good reason to think  $\phi$  is false. Analogously, suppose Monday John told me he is considering seriously a Tuesday departure for Boston, and I know he travels there for his company quite often. Then on Tuesday I can be well-positioned to make a modal claim that requires for its truth that there be nearby worlds where John has departed for Boston. And no less so, if in fact there are no such nearby worlds, say, because (unbeknownst to me and John) John’s company on this special occasion has no money to pay for travel. This sort of faultlessness is not precluded by the kinds of cases we have been considering or by the kinds of explanations we have been providing. A speaker may falsely claim something that requires closeness, while being well-positioned to claim it. It is true that on our account epistemic possibility claims are not as easy to assert as they would otherwise be if their truth values depended solely upon the speaker’s epistemic states. But that is not to admit that these claims are usually *too* difficult to assert.

Sober Contextualism falls nicely under Kratzer’s elegant, simple and perfectly general approach to modality. It avoids the need for error-theoretic,

socio-pragmatic, and exotic explanations of the interesting data, and instead opts for a straight solution to the central relativist challenge by explaining eavesdropping, retraction and disagreement considerations with familiar resources. Additionally it is best positioned to explain the subtleties in the shape of the data—subtleties that for the most part are overlooked in the literature.

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